

AMENDMENTS TO THE CLAIMS

Please add claims 26 and 27 and amend claims 1, 2, 8, 10, and 21 as follows:

1. (Currently Amended) An information display apparatus comprising:
a fan face that is openly/closably bent like bellows, the fan face comprising a thin film flat display formed on a flexible and bendy thin film, the thin film flat display comprising a full color organic EL display capable of displaying a full color television image;
a pair of main ribs ~~located at~~ joined to respective ends of ~~[[a]]~~ the fan face, the fan face being
disposed between the main ribs;
a plurality of intermediate ribs interposed between the main ribs, the fan face being joined to
the intermediate ribs; and
a pivot for turnably fixing the main ribs and the intermediate ribs in a root portion; and the
fan face joined to the intermediate ribs between the pair of main ribs as well as openably/closably
bent like bellows,
wherein ~~either at least a part of the fan face comprises a thin film flat display formed on a~~
flexible and bendy thin film, or the thin film flat display formed on the flexible and bendy thin film is
disposed to at least a part of the fan face, and wherein said thin film flat display comprises a full
color organic EL display capable of displaying a full color television image, and one of said main ribs
comprises a television receiver circuit is disposed in one of the main ribs.
2. (Currently Amended) An information display apparatus comprising:
a pair of main ribs ~~located at~~ respective ends of a fan face;
a plurality of intermediate ribs interposed by the main ribs;
a pivot for turnably fixing the main ribs and the intermediate ribs in a root portion; and

[[the]] a fan face joined to the intermediate ribs and disposed between the pair of main ribs as well as openably/closably bent like bellows, the fan face comprising:

a thin film flat display formed on a flexible and bendy thin film, the thin film flat display having a back surface;[[,]]

a plurality of mountains having vertex portions that are joined to the back surface of the thin film flat display such that the mountains of the fan face are joined in at least a part of the fan face to make the thin film flat display have a flat surface in an unfolded state of the fan face; and

a plurality of valleys connected to the mountains and to the back surface of the thin film flat display by strings that pull the back surface of the thin film flat display in a direction of the valleys when the fan face is being folded such that a result of the folding of the fan face is the thin film flat display being folded to the valleys of the fan face ~~wherein, in an unfolded state of the fan face, a thin film flat display formed on a flexible and bendy thin film has a flat surface and is joined to vertex portions of mountains of the fan face such that the mountains of the fan face are joined in at least a part of the fan face, and wherein, when the fan face is folded, the thin film flat display is folded to valleys of the fan face along the fan face in association with the folding operation.~~

3. (Canceled).

4. (Previously Presented) An information display apparatus according to claim 1, wherein one of the main ribs comprises a keyboard.

5. (Previously Presented) An information display apparatus according to claim 1, wherein the intermediate ribs comprise keyboards comprising touch switches.

6. (Previously Presented) An information display apparatus according to claim 1, wherein one of the main ribs comprises a computer system for information processing.

7. (Previously Presented) An information display apparatus according to claim 1, wherein, to permit outside communication of audio, image, or data, at least one of:

a microphone and a speaker are mounted on one of the main ribs,

an antenna is mounted on one of the main ribs, and

one of the intermediate ribs is used as the antenna.

8. (Currently Amended) An information display apparatus comprising:

a thin film flat display formed on a flexible thin film, said thin film flat display being a full color organic EL display capable of displaying a full color image;

hold means for holding the thin film flat display from a back surface such that it is joined to front surfaces of a plurality of rigid rectangular substrates when they are arranged in parallel on a flat surface;

a case for accommodating the thin film flat display; and

a take-up unit disposed in the case for taking up and accommodating the thin film flat display together with the hold means in the case using a direction parallel with long sides of the rigid rectangular substrates as an axis.

9. (Previously Presented) An information display apparatus according to claim 8, wherein at least one of two confronting side walls of adjacent substrates of said rigid rectangular substrates comprises a magnet, and

wherein two of said adjacent substrates are connected by a magnetic force of said magnet such that a flat plane is formed when said thin film flat display is expanded.

10. (Currently Amended) An information display apparatus comprising:

a thin film flat display formed on a thin film, said thin film comprising at least one of flexible shape memory alloy, shape memory resin, shape memory alloy fiber, and shape memory resin fiber;

a case for accommodating the thin film flat display;

an accommodation unit disposed in the case for accommodating the thin film flat display by taking up or folding it; and

a heater disposed in the case ~~heat means~~ for heating the thin film flat display when it is accommodated or unfolded.

11. (Previously Presented) An information display apparatus according to claim 8, wherein the thin film flat display comprises an electronic paper.

12. (Previously Presented) An information display apparatus according to claim 8, wherein the case comprises a keyboard.

13. (Previously Presented) An information display apparatus according to claim 8, wherein the case comprises a computer system for information processing.

14. (Previously Presented) An information display apparatus according to claim 8, wherein the case accommodates a microphone, a speaker, and an antenna to permit outside communication of audio, image or data.
15. (Previously Presented) An information display apparatus according to claim 1, wherein the thin film comprises at least one of shape memory alloy, shape memory resin, shape memory alloy fiber, and shape memory resin fiber.
16. (Previously Presented) An information display apparatus according to 15, further comprising means for heating the thin film.
17. (Canceled).
18. (Previously Presented) An information display apparatus according to claim 2, wherein one of the main ribs comprises a keyboard.
19. (Previously Presented) An information display apparatus according to claim 2, wherein the intermediate ribs comprise keyboards comprising touch switches.
20. (Previously Presented) An information display apparatus according to claim 2, wherein one of the main ribs comprises a computer system for information processing.

21. (Currently Amended) An information display apparatus comprising:

a fan face that is openly/closably bent like bellows, the fan face comprising a thin film flat display formed on a flexible and bendy thin film, the thin film flat display comprising a full color organic EL display capable of displaying a full color image;

a pair of main ribs located at respective ends of [[a]] ~~the fan face, the fan face being disposed between the main ribs;~~

a plurality of intermediate ribs interposed between the main ribs, ~~the fan face being joined to the intermediate ribs;~~ and

a pivot for turnably fixing the main ribs and the intermediate ribs in a root [[portions]] ~~portion; and the fan face joined to the intermediate ribs between the pair of main ribs as well as openly/closably bent like bellows,~~

~~wherein either at least a part of the fan face comprises a thin film flat display formed on a flexible and bendy thin film, or the thin film flat display formed on the flexible and bendy thin film is disposed to at least a part of the fan face, and wherein said thin film flat display comprises a full color organic EL display capable of displaying a full color television image, and one of said main ribs comprises a computer system for information processing~~ is disposed in one of the main ribs.

22. (Previously Presented) An information display apparatus according to claim 8, wherein the thin film comprises at least one of shape memory alloy, shape memory resin, shape memory alloy fiber, and shape memory resin fiber.

23. (Previously Presented) An information display apparatus according to claim 8, wherein adjacent substrates of said rigid rectangular substrates comprise confronting side walls,

wherein one of said confronting side walls comprises a concave portion,
wherein an other of said confronting side walls comprises a convex portion, and
wherein said convex portion is engaged with said concave portion such that an arc shape is formed in a direction of the take-up unit.

24. (Previously Presented) An information display apparatus according to claim 22, wherein said take-up unit comprises:

at least three rollers with which the thin film flat display is engaged, at least one of the rollers comprising a turning shaft around which said thin film flat display is taken up and accommodated, at least two of the rollers guiding said thin film flat display either toward or away from the turning shaft; and

a heater that heats the rollers such that the thin film flat display is softened to change shape while being taken up and accommodated by the turning shaft.

25. (Previously Presented) An information display apparatus according to claim 22, wherein said take-up unit comprises:

a plurality of fixed and moving rollers with which the thin film flat display is alternately engaged, said fixed and moving rollers being respectively alternately and oppositely disposed in said take-up unit, the thin film flat display being bonded to one of the fixed rollers;

a plurality of springs that urge the moving rollers in an x-axis direction either toward or away from the one of the fixed rollers; and

a heater that heats and softens the thin film of the thin film flat display to allow the thin film flat display to fold to a bellows state using the fixed and moving rollers.

26. (New) An information display apparatus according to claim 2, wherein the strings are disposed at a plurality of portions along a lengthwise direction of the intermediate ribs.

27. (New) An information display apparatus according to claim 2, wherein the strings are stretched straight in the unfolded state of the fan face.